

ABSTRACT OF THE DISCLOSURE

A semiconductor device has an active element structure formed on a semiconductor substrate. A first insulating film is provided above the semiconductor substrate. A first interconnect layer composed of copper is provided in a surface of the first insulating film. A second insulating film is provided on the first insulating film. A connection hole is formed in the second insulating film and has its bottom connected to the first insulating layer. A connection plug composed of a single crystal of copper is filled in the connection hole so that no other crystals of copper are provided in the connection hole. An interconnect trench is formed in a surface of the second insulating film and has its bottom connected to the connection hole. A second interconnect layer is provided in the interconnect trench.